

## REMARKS

Claims 1-5, 7, 8, 10, 11, 13, 14 and 19-21 have been rejected under 35 U.S.C. § 112. The Examiner states that, respecting Applicant's arguments, the Examiner cannot find, in Figs. 3, 4, (6), 7, 9 and 10 and specification pages 15-18 and 24-25, "subtracting the right and left high frequency band signals from the left and right surround channel outputs when the summed high frequency band signal is dominant."

The Examiner also argues that "subtracting the dynamically varied right and left high frequency band signals from the left and right surround channel outputs when the summed high frequency band signal is dominant" (see specification pages 15-18 and 24-25 and Figs. 1-13) was not supported in the further detail in the specification nor in any of claim."

Applicant respectfully disagrees. Claims 1, 4, 7, 10, 13 and 19 are the relevant independent claims.

In the previous Office Action, the Examiner indicated with respect to 35 U.S.C. § 112 that "The subtracting 'the right and left high frequency band signals from the left and right surround channel outputs when the summed high frequency band signal is dominant' (see specification page 5, lines 1-2 and page 18, lines 3-20) was not described in the further detail in the specification nor in any of claim."

Applicant thought the Examiner was concerned with the subtracting step which is explained and illustrated in accordance with the Figures and specification as noted by the Applicant in the response to that Office Action. It now appears that the Examiner's concern is related to "dominance," not to "subtracting." The determination of "dominance" is explained in detail in the specification (p.9, ln.13-15, ln.22 in reference to Figs. 1 and 2).

In any event, the claimed subject matter is illustrated in the drawings and described in the specification in a manner to enable one skilled in the art to make or use the invention. This will now be explained in reference to claim 1.

### **CLAIM 1**

***a. “feeding left and right input signals to left and right front and surround channel outputs, respectively”***

Left input signal  $L_H$  is fed to left front output 56 (Fig.3) and to left surround channel output 84 (Fig.6).

Right input signal  $R_H$  is fed to right front output 57 (Fig. 4) and to right surround channel output 85 (Fig. 7). If the VCA 134 has unity gain, then  $L_H$  appears unaltered at the left front output 56 (p.1, ln.1-2).

***b. “summing the left and right input signals to provide a summed signal”***

Summing amplifier 20 outputs the summed signal  $L_H + R_H$  (Fig.1) which is an input to the center front output 81 (Fig.5).

***c. “determining when the summed signal is dominant”***

The summed signal is dominant when the output of the difference amplifier 47 is positive (p.12, ln.8-11; Fig.2).

***d. “dynamically varying the amplitude of the right and left input signals”***

The amplitude of the right input signal is dynamically varied by the VCA 131 (Fig.3; p.15, ln.27-p.16, ln.7) and the amplitude of the left input signal is dynamically varied by the VCA 141 (Fig.4; p.17, ln.22-26). The operation of the VCA's is well within the knowledge of those skilled in the art, including the use of inverting amplifiers 160 and 170 with VCA's which will reinvert the inverted signals.

e. *“subtracting the dynamically varied right and left input signals from the left and right surround channel outputs, respectively, when the summed signal is dominant.”*

“Subtracting” occurs at the difference amplifiers 163 and 173 (Figs. 6 and 7). The right input signal is dynamically varied by VCA 161 and subtracted from the left surround channel output 84 and the left input signal is dynamically varied by the VCA 171 and subtracted from the right surround channel output 85. This occurs when the summed signal is dominant, dominance being indicated by the output of the difference amplifier 47 (as above noted) in the steering voltage generator 40 which provides the control signal C (Figure 1) which controls the VCA’s 161 and 171.

#### **CLAIMS 4, 7, 10 AND 13**

Claim 4 is “enabled” for the reasons stated with respect to claim 1. Claim 4 further adds the filtering of the left and right input signals as shown (See Figures 3, 4, 6, 7, 9 and 10) and described in the amended specification (see, e.g., p.16, ln.10-16). In claim 4, the filtering is not limited to “dynamic” filtering. Only “dynamic amplitude” control is required.

Claim 7 specifically addresses the “dynamic” character of the filters. Amplitude need not be limited to “dynamic” control.

Claims 10 and 13 specifically address “dynamic amplitude” with filtering not limited to “dynamic” filtering. Claims 10 and 13 add further limitations respecting the application of the “dynamic amplitude” subtracting process, none of which appear to be presently at issue.

This analysis extends to the dependent claims as well.

#### **DRAWING OBJECTIONS**


With respect to the drawings objections, the undersigned attorney for Applicant thanks Examiner Lao for a telephone conference on August 31, 2005. The Examiner confirms that the Patent Office file does have the drawing sheets in proper form and no further drawing changes are required at this time.

### **CONCLUSION**

Applicant's description explaining and Figures showing Applicant's preferred embodiments do not bar allowance of claims broader than the specific embodiments shown. One skilled in the art, based on Applicant's disclosure, can make or use the invention as defined in any and all of the claims. Applicant, therefore, respectfully requests allowance of all claims.

It is understood there is no fee due at this time. However, should a fee deficiency have occurred, please charge Deposit Account No. 50-1971 per 37 C.F.R. § 1.25.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Frank J. Catalano", is written over a horizontal line. To the right of the signature, the date "9/1/05" is handwritten.

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Date

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